

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (currently amended) A device for controlling a thick matter pump with two conveyor cylinders (50, 50') communicating via two end openings (52) in a material supply container (54), operated in counter stroke by a hydraulic reversible pump (6) via hydraulic drive cylinders (5, 5') ~~control driven~~ by said pump, with a hydraulically actuated pipe switch (56) provided within the material supply container (54), ~~on its~~ the inlet side of the pipe switch alternately connectable to one of the openings (52) of the conveyor cylinders (50, 50'), freeing the respective other opening of the conveyor cylinders (50, 50'), and on the outlet side the pipe switch is connected with a conveyor conduit (58), wherein the drive cylinders (5, 5') are respectively hydraulically connected at the pump-end with an opening a connector of the reversible pump (6) via ~~respectively~~ one hydraulic line (11, 11'), and wherein the drive cylinders (5, 5') on their other end are connected on their other end to each other via an oscillating oil line (12), and further comprising a computer supported reversing device (18) for reversing the reversible pump (6) after the conclusion of each piston stroke, wherein the pump-end pump-side hydraulic connections lines (11, 11') of the drive cylinders and the hydraulic lines (82) of the hydraulically actuated pipe switch (56) are provided in parallel connected branches of one of the reversible pump supplied hydraulic circuits (11', 82; 11), wherein the pipe switch includes a position indicator (80) sensing the pipe switch pivot position, that at least one of (a) at least two cylinder switch sensors are provided spaced apart from each other on the drive cylinders, sensing the pistons of the drive cylinders as they pass by, ~~and/or or~~ (b) the pressure sensor is provided sensitive to the changes in pressure sequence at the high pressure output of the reversible pump, and wherein the computer supported reversing device (18) includes a control program responsive on the one hand to the output signal of the position sensor provider and on the other hand to at least one of (a) the output signal of the cylinder switch sensors and (b) ~~and/or~~ the pressure sensor, for a program-controlled activation of a control element for adjusting at least one of (a) the flow-through amount and (b) the ~~for~~ direction of the reversible pump, as well

as a reversing element (79) provided in the hydraulic branch (82) of the pipe switch (56), and wherein the computer supported reversing device includes a control routine for the computer controlled adjustment of the flow-through amount and the direction of the reversible pump such that in the case of an impacting piston the pressure supply to an actuating element of the pipe switch is reversed and the conveyance amount supplied by the reversible pump is increased, until the pipe switch has reached a defined intermediate position on its pivot path, and subsequently the conveyance amount supplied by the reversible pump is returned until the pipe switch has reached an end position.

2. (currently amended) The device according to Claim 1, wherein the position indicator ~~or encoder~~ of the pipe switch is an angle transmitter.
3. (previously presented) The device according to Claim 1, wherein the control element is a diagonal disk of the reversible pump.
4. (previously presented) The device according to Claim 3, wherein the diagonal disk is adjustable hydraulically or electromechanically.
5. (previously presented) The device according to Claim 1, wherein the reversing element is an electromagnetic or mechanically controllable directional valve.
6. (currently amended) A process for controlling a thick matter pump with two conveyor cylinders (50, 50') communicating via two end openings (52) in a material supply container (54), operated in counter stroke by a hydraulic reversible pump (6) via hydraulic drive cylinders (5, 5') ~~control driven~~ by said pump, with a hydraulically actuated pipe switch (56) provided within the material supply container (54), on its inlet side alternately connectable to one of the openings (52) of the conveyor cylinders (50, 50'), freeing the respective other opening, and on the outlet side connected with a conveyor conduit (58), wherein the drive cylinders (5, 5') are respectively hydraulically connected at the pump-end with an opening ~~a connector~~ of the reversible pump (6) via ~~respectively~~ one hydraulic line (11, 11'), and wherein the

drive cylinders (5, 5') ~~on their other end~~ are connected on their other end to each other via an oscillating oil line (12), and further comprising a computer supported reversing device (18) for reversing the reversible pump (6) after the conclusion of each piston stroke, wherein during ~~the~~ reversing process the pivot position of the pipe switch is measured, wherein during thick matter conveyance ~~the conveyor process~~ the position of the piston in the drive cylinders is monitored and in a terminal segment of each piston stroke the piston speed is slowed down by reducing the conveyance amount supplied by the reversible pump while the piston is conveyed to its end position, wherein in the case of an impacting piston the pressure supply to an ~~the~~ actuating element of the pipe switch is reversed and the conveyance amount supplied by the reversible pump in a push-over ~~an elevating~~ phase is increased without direction change, until the pipe switch has reached a defined intermediate position on its pivot path, wherein subsequently the conveyance amount supplied by the reversible pump is returned until the pipe switch has reached an end position, and wherein the flow-through direction of the reversible pump is reversed and the pressure supply to the pipe switch is interrupted via a reversing element or is maintained by reversing.

7. (previously presented) The process according to Claim 6, wherein in the subsequent flow-through reversal of the reversible pump a hydraulic reversing element connected with the pipe switch is reversed or blocked.
8. (currently amended) The process according to Claim 6, wherein the reversible pump in the push-over ~~elevation~~ phase during the reversing process is for a short time controlled to a maximal conveyance amount.